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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/716,288

Applicant(s)

KUMAR ET AL.

Examiner

SHAWN AN

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. As per Applicant's instructions as filed on 1/14/08, claims 1, 4, 6, 11, and 13 have been amended, and claim 15 has been newly added.

Response to Remarks

2. Applicant's remarks as filed on 1/14/08 have been fully considered but they are not persuasive. The Applicants present an argument of which Inoue reference does not teach storing a portion of a first frame in a row of memory, and storing a portion of a second frame in the row of memory as recited in claims 1 and 8.

However, after careful scrutiny of the Inoue's reference, the Examiner must respectively disagree, and maintain the grounds of rejection for the reasons that follow.

In response to the argument, Inoue discloses storing a portion (macroblock) of a first frame in a (first channel) row of memory (Fig. 2B, 220A; Fig. 3A, 212, Channel A; Fig. 4B, Row0), and storing a portion of a second frame in the (second channel) row of memory (Fig. 2B, 220B; Fig. 3A, 212, Channel B; Fig. 4B, Row136)(col. 9, lines 7-28).

In other words, the Row0 and the Row135 are essentially on the same row, since the each (macroblock) of the channels (A,B,C) of the multi image memory (212) is stored as concatenated images/frames (each Field comprises Bank 0 and Bank 1, wherein a frame comprises two Fields), which is the substantially the same/similar layout as Applicant's Fig. 8 (comprises Bank 0 - Bank 3).

As per Applicant's arguments regarding amended and newly added claims, please refer to the following grounds of rejection incorporating previously cited prior art references.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1, 4, 8, 11, and 15 are directed to a computer implemented method for storing ..., and a method for decoding ..., but the bodies of the claims are directed to a series of steps drawn to storing portions of frames in a row of memory without practical application that produces any useful, tangible, and concrete results. Since dependent claims 2-3, 5-7, 9-10, and 12-14 are directed to further limitations based on the methods of claims 1, 4, 8, 11, and 15, claims 1-15 as a whole do not fall within the statutory classes set forth in 35 U.S.C. 101.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 8-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Inoue (5,920,352).

Regarding claims 8-9, Inoue discloses a method for decoding video data, said method comprising:

storing a portion (macroblock) of a first frame in a (first channel) row of memory (Fig. 2B, 220A; Fig. 3A, 212, Channel A; Fig. 4B, Row0), and storing a portion (macroblock) of a second frame in the (second channel) row of memory (Fig. 2B, 220B; Fig. 3A, 212, Channel B; Fig. 4B, Row136)(col. 9, lines 7-52).

Regarding claim 11, Inoue discloses a method for decoding video data, said method comprising:

storing a top (Field A0) macroblock row of a first frame in a first one or more rows of memory (Fig. 4B, Field A0), and storing a top (Field B0) macroblock row of a second frame in a second one or more rows of memory (Fig. 4B, Field B0)(col. 9, lines 7-44; and

a particular one of the first one or more rows of memory being adjacent to a particular one of the second one or more rows of memory (Fig. 2B, 220A-220B; Fig. 3A, 212, Channels A-B; Fig. 4B, Field A0 and Field B0).

Regarding claim 10, Inoue discloses the portion of the first frame being in a top half of the first frame, and the portion of the second frame being in a top half of the second frame (Figs. 4B and 6).

Regarding claim 12, Inoue discloses first one or more rows of memory are contiguous, and wherein the second one or more rows of memory are contiguous (Fig. 4B; A0 to A1 to B0 to B1 to C0 to C1).

Regarding claim 13, Inoue discloses storing a first macroblock row of a third frame in a third one or more rows of memory (C0); and a particular one of the third one or more rows of memory being adjacent to another particular one of the second one or more rows of memory (B1)(Fig. 4B).

Regarding claim 14, Inoue discloses:

storing a second macroblock row of the first frame in a fourth one or more rows of memory (Fig. 6, see R2);

the third one or more rows of memory being continuous (Fig. 6, see R3); and

wherein a particular one of the fourth one or more rows is adjacent to another particular one of the third one or more rows (R5) of memory (Fig. 6, see R4).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue (5,920,352) in view of Kadono (6,836,273 B1).

Regarding claims 1-2 and 4, all of the claimed subject matter have been met by Inoue as discussed above with respect to claims 8-9 and 11 with the exception of a computer readable memory for storing..., and a processor for executing

However, Kadono teaches image decoding method and providing memory management program storage medium which can increase the efficiency of the memory bank and greatly reduce the risk of erasure of the frame data for decoding (col. 6, lines 28-45).

Kadono also teaches a diagram for explaining a storage medium which contains program for implementing the memory management method and image decoding method by a computer system (Figs. 14a-14c),.

Therefore, it would have been considered obvious to one of skill in the art employing Inoue's method for decoding video data to incorporate Kadono's teachings as above so that the instruction memory (a computer readable medium) stores computer executable instructions, and the processor executes the computer executable instructions, wherein the execution of the computer executable instructions performs Inoue's method for decoding video data as discussed above, thereby increasing the efficiency of the memory bank and greatly reducing the risk of erasure of the frame data for decoding.

Regarding claim 3, Inoue discloses the portion of the first frame being in a top half of the first frame (Field A0), and wherein the portion of the second frame is in a top half of the second frame (Field B0)(Figs. 4B).

Regarding claim 5, Inoue discloses first one or more rows of memory are contiguous, and wherein the second one or more rows of memory are contiguous (Fig. 4B; A0 to A1 to B0 to B1 to C0 to C1).

Regarding claim 6, Inoue discloses storing a top macroblock row of a third frame in a third one or more rows of memory (C0); and a particular one of the third one or more rows of memory being adjacent to another particular one of the second one or more rows of memory (B0, B1)(Fig. 4B).

Regarding claim 7, Inoue discloses:

storing a second macroblock row of the first frame in a fourth one or more rows of memory (Fig. 6, see R2);

the third one or more rows of memory being continuous (Fig. 6, see R3); and
wherein a particular one of the fourth one or more rows is adjacent to another particular one of the third one or more rows (R5) of memory (Fig. 6, see R4).

Regarding claim 15, Inoue discloses a circuit for decoding video data, said circuit comprising:

storing a first macroblock row of a first frame in a first one (first channel) or more rows of memory (Fig. 2B, 220A; Fig. 3A, 212, Channel A; Fig. 4B, Row0);

storing a first macroblock row of a second frame in a second one or more rows (second channel) of memory (Fig. 2B, 220B; Fig. 3A, 212, Channel B; Fig. 4B, Row136)(col. 9, lines 7-52);

storing a first macroblock row of a third frame in a third one or more rows (third channel) of memory (Fig. 2B, 220B; Fig. 3A, 212, Channel C; Fig. 4B, Row 272)(col. 9, lines 7-52), the third one or more rows of memory being continuous (Fig. 4B), Row 272-Row 339).

a particular one of the first one (Row0) or more rows of memory is adjacent to a particular one of the second one or more rows (Row136) of memory (Fig. 3A, 212, Channel A adjacent to Channel B);

a particular one of the third one or more rows (Row 272) of memory is adjacent to another particular one of the second one or more rows of memory (Fig. 3A, 212, Channel C adjacent to Channel B);

a particular one of the fourth one (R273) or more rows of memory is adjacent to another particular one of the third one or more rows of memory (Fig. 3A, 212, Channel C; Fig. 4B, Row 272).

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to *Shawn An* whose telephone number is 571-272-7324.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 2621

12. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/SHAWN AN/

Primary Examiner, Art Unit 2621

3/30/08

